Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of Preserving the	)	
Open Internet Broadband Industry	)	GN Docket No. 09-191 and
Practices	)	WC Docket No. 07-52

Comments of the American Consumer Institute

The American Consumer Institute Center for Citizen Research (ACI) is a nonprofit (501c3) educational and research institute with the mission to identify, analyze and project the interests of consumers in selected legislative and rulemaking proceedings in information technology, health care, insurance, energy and other matters. Recognizing that consumers' interests can be variously defined and measured, and that numerous parties purport to speak on behalf of consumers, the goal of ACI is to bring to bear the tools of economic and consumer welfare analyses as rigorous as available data will allow, while taking care to assure that the analyses reflect relevant and significant costs and benefits of alternative courses of government action.

Summary

In this proceeding, the Commission seeks to codify existing net neutrality principles. It is doing so in order "to protect the Internet's openness." The Commission has indicated its intent to focus on facts and reasoned analyses to determine whether imposing new Internet regulations would produce more benefits to society than costs. Evidence cited in these comments suggests that consumers would be worse off as a result of imposing Internet regulations. In our review of industry rates, investment, profits, market concentration, competition and choice, we find no compelling evidence of market failure to justify the regulations being proposed in this NPRM. Furthermore, we find that *ex ante* regulations, as proposed here, risk will force consumers to forgo important economic benefits and to pay higher consumer prices. We believe that the proposed net neutrality regulations would impose substantial costs owing to delay, uncertainty, unanticipated impacts and other regulatory imperfections. The result will be to reduce network service quality; to impair investment and innovation, and to reduce aggregate consumer welfare. In general we find the case for the proposed regulations to lack factual and analytical support and bereft of any specific consideration of economic welfare.

Therefore, we urge the commission to disregard rhetoric from all sides of the debate and to conduct a full and fair analysis of the costs and benefits of its proposal before establishing new regulations the full impact of which is likely to be difficult to pinpoint in this rapidly and dramatically changing sector. We also ask the Commission to insist that proponents provide quantitative, data-rich, analytical assessments showing that consumer welfare will increase, just as Congress through the Recovery Act has directed the Commission to include in its broadband plan recommendations that are sensitive and

responsive to the requirements for "advancing consumer welfare."[1] We ask the Commission to follow these requirements and demonstrate how these rules would increase consumer welfare. The record to date is woefully inadequate in that regard.

In the remainder of these comments, we call attention to the dearth of evidence of market failure sufficient to warrant the risks of imposing economic regulation on one of the most dynamic sectors in the economy. We urge the Commission to consider the beneficial conduct and performance of the sector in recent years and specifically note declining concentration and increased consumer choice, high rates of investment, falling rates, and modest earnings as indicia of the workability of market forces under current rules. We express particular concern with the Commission's proposal to deny network providers the opportunity to adopt well known, widely practiced, consumer welfare generating "multi-sided market" business practices of the kind used by other Internet content and applications providers. Finally, we urge the Commission to insist on rigorous cost benefit analyses of current market performance and the costs associated with potential and in some cases assured regulatory imperfections.

There Is No Evidence of Market Failure to Justify Net Neutrality or other Internet Regulations

Evidence of market failure is generally sought in market structure, the conduct of firms within the sector, and most importantly firm performance. A reasonable assessment of the structure, conduct and performance of the broadband network supply sector provides no substantial evidence of failure and certainly not enough to warrant imposition of broad and deep regulation of operator conduct, the results of which cannot be known in any detail or certainty, but raise the specter of serious unanticipated consequences of regulating this dynamic sector. Supporters of regulation rely heavily on two elements from dozens of possible indicators from the structure-conduct-performance paradigm. They claim the problem to be one of concentration or duopoly, despite the fact that the markets in the IT sector and, indeed, economy wide are frequently quite concentrated and perform nonetheless quite well without the kinds of regulations being proposed here.

The Commission has conceded on numerous occasions this very point and is on record conceding that competition is imperfect everywhere and seldom reflects elements of pristine textbook models. Relevant markets in the information technology, web-centered space are all quite concentrated and headed by firms that dominate performance in individual submarkets. There is substantial concentration at all layers, including in markets for search, online auctions, software, applications, and popular content. Different layers are concentrated, have substantial sunk costs and reflect enormous first mover advantages possessed by leading firms.

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[1] Recovery Act § 6001(k)(2)(D). Consumer welfare is a well-accepted concept in the economic literature with a precise definition that measures, in dollar terms, economic benefit bestowed on consumers. For the purchase of goods or services, it represents the dollar benefit calculated as the amount that consumers would have been willing to pay minus what they actually paid. Changes in public policies and regulations, the imposition of taxes and failures in the market can be calculated by measuring changes in consumer welfare.

A recent review of the literature on duopoly from different perspectives yielded no evidence that duopoly or concentration *per se* is a sufficient indicator of market failure.[2] The market is concentrated on the seller side and there are barriers to entry, but that is by no means sufficient to warrant the kinds of government controls being proposed. Indeed, if concentration and entry barriers were sufficient to warrant regulation to check market power, we would be considering imposing constraints on firms in different layers of the Internet service network.[3]

But, while market structure is one indicator of competition, its character in this market is not sufficient alone to warrant imposing government controls over rates and service. Theories of oligopoly abound and continue to proliferate as economists explore outcomes from various hypothetical firm motives, information bases, assumptions about reaction patterns, time frames, cost structures, demand patterns and others.[4] The fact is that there is no basis for concluding that regulation is warranted on the basis of casual characterizations of market structure being made by proponents of more intensive regulation.[5]

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[2] "My review of six different analytical perspectives on duopoly turned up negligible support for the *market structure/market failure/need for regulation* train of logic. The literature review and search for evidence that duopoly is per se an indicator of market failure and sufficient to warrant utility type regulation focused on six different perspectives. These included: 1) the neoclassical industrial organization view of the relations between structure, conduct and performance, 2) duopoly models of game theorists, 3) outcomes from experimental economics focused on duopoly, 4) evidence from other sectors served by two dominant firms, 5) conclusions from competition policymakers and analysts in general and 6) facts about the historical and current price, service and investment performance broadband providers. While each perspective recognized that competition was imperfect, none found the basis for concluding that duopoly markets are not workably or effectively competitive or that duopoly, not otherwise analyzed, warrants imposition of economic regulation. See Larry F. Darby, "To Regulate or Not to Regulate: Where Is the Broadband Market Failure?" The Consequences of Net Neutrality on Broadband Investment and Consumer Welfare: A Collection of Essays, Released by the American Consumer Institute, November 19, 2009, p. 72. Available online at: http://www.theamericanconsumer.org/wp-content/uploads/2009/12/nn-and-market-failuare.pdf.

[3] And, in fact, that is clearly suggested in "Consumer Groups'" brief: "The role of regulation should be to ensure that strategically placed actors with market power cannot undermine innovation at any layer of the platform." Comments of CFA, CU, and Free Press filed *In the Matter of Broadband Industry Practices*, Notice of Inquiry, WC Docket No. 07-52, p. 9.

[4] The vast literature characterizing different behavior patterns in imperfectly competitive markets is reviewed by Carl Shapiro, "Theories of Oligopoly Behavior," *Handbook of Industrial Organization*, vol. 1, chapter 6, (R. Schmalensee and R. Willig, eds.), North Holland, 1989. There Shapiro summarizes the uncertainty from these models and counsels humility in their use to guide policy. "I view the development of oligopoly theory as providing us with an understanding of which environments lead to various types of equilibrium behavior, and with some sense of the methods by which large firms both compete and seek to avoid competition. But I do not expect oligopoly theory…to give tight inter-industry predictions regarding the extent of competition or collusion." (Emphasis supplied) p. 332.

[5] According to Professor Kahn: "There is no consensus among economists about the likely sufficiency of competition under duopoly." Alfred E. Kahn, Statement to the FTC Workshop on Broadband Connectivity and Competition Policy, February 13, 2007, p. 2. The outcome in the broadband market is especially uncertain. This uncertainty is illustrated by the analysis of duopoly in a dynamic environment with both switching costs and network externalities. See, Toker Doganoglu and Lukasz Grzybowski, "Dynamic Duopoly Competition with Switching Costs and Network Externalities", January, 2006, p. 26, available on the Social Science Research Network at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=668083. The presence of switching costs and network externalities have countervailing effects. "While the former effect

Given the indeterminacy of structure alone in judging the adequacy of markets in creating consumer welfare and establishing the need for government involvement, the Commission is obliged to look beyond market structure and focus instead on indicators of both market conduct of those firms and their actual performance. Here the data are more plentiful, the conclusions less speculative, and the policy implications more clear cut.

If the structural case for regulation is less than compelling, indicia of failure in the realm of market conduct is even less so. Advocates focus intently on two episodes – the Madison River blockage by a small telephone carrier and another by a cable operator. In both instances the behavior has been discontinued and, most notably, without any significant consumer harm. The incidents provide the basis for conjecture, but that conjecture is no basis for what might prove to be very costly regulation. Other indicia of conduct and performance indicate significant market success.

Broadband Prices Are Decreasing

U.S. broadband providers are among the largest investors of any industry in the U.S. The Commission's own analysis of the broadband market indicates rising output and penetration.[6] Given the existence of high fixed costs and relatively low variable and incremental connection costs, there are substantial pressures on suppliers of broadband access to lower rates to achieve fill and to contribute to coverage of fixed costs. Prices are falling as indicated by the decline in Verizon charges for 1.5 MB DSL from $80.00 per month to $15.00 per month over the May 2001 to May 2006 timeframe.[7] According to a June 2008 report by USTA, as broadband speeds have increased, in the face of

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leads to incentives to increase prices, the latter encourages firms to reduce their prices. Hence, the equilibrium is attained when these opposing incentives are balanced. However, there is no telling ex-ante where this balancing would occur."

[6] "High-Speed Services for Internet Access: Status as of June 30, 2006," FCC Wireline Competition Bureau, Industry Analysis and Technology Division, January 2007. http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-270128A1.pdf.

[7] There are other indicators of both falling prices and increasing linespeeds. Professor Ellig summarized recent developments in a report to the Federal Trade Commission:

"Substantial price reductions have occurred in recent years. Between 2004 and 2005, BellSouth cut the monthly price of 1.5 mb DSL from $39.95 to $32.95, a 17 percent drop. Qwest dropped its promotional price from $26.99 to $19.99 and extended the term from three months to a year. SBC cut its promotional price, good for a year, from $26.95 to $14.95. Verizon Wireless reduced the monthly fee for wireless broadband service using a PC card by 25 percent, from $79.99 to $59.99. Another indicator of dynamic performance competition in broadband is the rate at which maximum speeds have increased. In its first report on the extent of broadband deployment, the FCC noted that the maximum speeds were 3 mbps for cable modem service, 1.5 mbps for DSL, and under 500 kbps for satellite. Speeds have obviously improved greatly since then. Between 2004 and 2005, a number of major broadband providers increased the speed of their service. SBC increased the upload speed of its DSL service threefold, from 128k to 384k. Cablevision increased its download speed from 5 mb to as much as 10 mb. Comcast increased its download speed from 3 mb to 4 mb and its upload speed from 256k to 384k. Time Warner increased download speed from 3 mb to as much as 8 mb. These changes represent performance improvements of between 25 percent and 200 percent—in one year. In 2006, company web pages indicated further improvement in maximum speeds. Comcast offered a maximum download speed of 6 mb, Cox offered 15 mb, and Cablevision offered 30 mb." See Jerry Ellig, "Public Interest Comment on Broadband Connectivity Competition Policy," Mercatus Center, Project No. V070000, George Mason University, February 28, 2007.

extraordinary increases in demand, prices have significantly declined.[8] For example, DSL services running between 768 kbps to 1.5 mbps downstream in 2001 could be purchased at half the price just six years later.[9] Similarly, DSL services running between 768 kbps and 1.5 mbps were priced nearly equivalent to DSL services running 15 mbps in 2007.[10] The most recent government statistics suggest that these online ISP prices are continuing to decline. The Bureau of Labor Statistic's Consumer Price Index for Internet Services and Electronic Information Providers shows that from November 2005 to November 2009 consumer prices declined by 5% per year in nominal terms and 8% per year when adjusted for inflation.[11] In other words, whether in nominal dollars, in inflation adjusted dollars, in megabits per second or quality adjusted terms, consumer prices are falling and that provides yet further evidence that regulations are not needed to address a market failure.

The Rate of Network Investment Is Substantial

A critical aspect of performance by ISPs is the rate of capital formation. The primacy of that aspect of performance is the combined effect of the capital intensity of networks, the fact that costs decline with scale, the relatively high uncertainty and risk associated with investment, and the consensus view that a rapid buildout of networks is necessary as an element of national broadband policy.

In this regard, the performance of the sector has been exemplary. We cite two indicators of relatively high rates of investment by ISPs. First is the gross amount committed in recent years, where, in 2008 (the latest year available), the five network providers accounted for over $52 billion in investment.[12] From 2006 through 2008, the major ISPs invested approximately $145 billion, or $1,300 per US household.

Secondly, data taken from SEC filings indicate that ISPs invest a substantially larger share of their cash flow from operations than other firms in the sector and for the economy at large. Thus, in calendar year 2008, the latest for which annual data across the sector are available, the largest broadband ISPs (AT&T, Verizon, Qwest, Time Warner, CableVision, and Comcast) reinvested more than 60% of cash flow from operations. This is well above the same indicator for our sample of other companies in the S&P 500 and, quite notably, well above the investment rate of Google (30%), Yahoo (40%) and Amazon (20%). Thus, the average propensity to invest of "core" ISP companies is higher than the economy average and 1.5 to 3.0 times a sample of "edge" companies.

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[8] Evidence of falling prices is documented by the United States Telecom Association, available online at http://www.ustelecom.org/uploadedFiles/Learn/Broadband.Pricing.Document.pdf. Also see, J. Gregory Sidak, "A Consumer Welfare Approach to Network Neutrality Regulations of the Internet," forthcoming in the *Journal of Competition Law & Economics*, Oxford Press, Vol. 2:3, 2006, p. 400. Sidak provides an example where the price of a 1.5 mbps DSL service declined by 81% during the last five years.

[9] Ibid, USTA, p.1, 2008.

[10] Ibid.

[11] BLS CPI-U indexes available at www.bls.gov and downloaded on January 12, 2010. The Internet service index includes all online consumer services, such as dialup and broadband services.

[12] Based on the company annual reports of AT&T, Verizon, Sprint, Comcast and Time Warner.

These data make clear that ISPs are making substantial network investments and, relative to content and applications providers, risking a higher percentage of their discretionary cash flow from operations. By these measures, it would appear that network investment is healthy and should not be discouraged by regulations that would undermine return on investments. We note in passing that there is not a shred of evidence in the record to suggest that the proposed regulations would encourage ISPs to invest more. In view of the high national priority being placed in the formation of a National Broadband Plan on broadening and deepening broadband networks, proponents should be obliged to provide data and analysis showing the effect on investment of the proposed net neutrality rules.

Net Neutrality Would Likely Reduce Network Investment and Investment–Driven Innovation within Broadband Networks

As noted above, data on recent capital expenditures and indicators of average propensity to invest out of cash flow from operations establish clearly that broadband network providers are aggressively investing in expanding and deepening networks to serve new Internet uses and a broader spectrum of users. That investment reflects efforts to diffuse network innovations on both the internal and external margins as broadband providers continue to modify legacy circuit-switched networks to reflect the digital transition and to offer the benefits of related network innovations to new subscribers. While little is known about the details of cause, effect, location and value of different "innovations," it is indisputable that investment typically accompanies innovation and many innovations can only be implemented and diffused via substantial commitments of capital. Turning the network into a social commons will only prove to discourage investment and innovation in the network, and thereby negatively affect investment and innovation throughout the ecosystem of the web.[13]

The term innovation is widely used, but is seldom defined in operational or analytical ways by net neutrality advocates. Indeed, our reading of the record to date yielded not a single operational definition offered by advocates nor, for that matter, by the Commission itself. Most statements and conclusions drawn by advocates in the record of the net neutrality debate are supported by little, or most frequently, no facts or analysis of the type the Commission and its staff have repeatedly solicited.

Any finding on rules impacting innovation that best create consumer welfare, or otherwise serve the public interest, should be based on, at a minimum: a definition of innovation; different kinds of innovation; an acceptable theory or principles of the sources and causes of innovation; some analysis of the diffusion of innovation; and some effort to link consumer welfare or the public interest to different types, sources and locations of innovation. There is none of that in the record, despite the importance of the phenomenon

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[13] "Network Management Facts and the Tragedy of the Commons," ConsumerGram, The American Consumer Institute, March 27, 2008, http://www.theamericanconsumer.org/2008/03/26/network-management-facts-and-the-tragedy-of-the-commons/; and "Tragedy of the Commons: Part II," ConsumerGram, The American Consumer Institute, April 3, 2008, available online at: http://www.theamericanconsumer.org/2008/04/03/tragedy-of-the-commons-%E2%80%93-part-ii/.

and the premier role assigned it in this proceeding. It is also highly germane to the outcome of this proceeding to emphasize that most of the innovations at the edge are dependent in the first instance on innovations within networks.

An important type of innovation – experimentation and adoption of new business models -- is explicitly ruled out for broadband network providers by the changes proposed in the NPRM.[14] One of the most important innovations "at the edge" is not a discovery, a new patent, a new service or any sort of technical innovation. Rather, it is the application of well-known business models adopted from two-sided market theory that involves reducing costs for the consumer side of the market by recovering costs from businesses – in this case giving search services to users while covering their costs from advertisers. The proposed rule would forbid the diffusion of this very important innovation to other important suppliers in the Internet value chain.[15]

We hasten to point out that new rules are two-edged swords in almost all cases. It is difficult to find a rule benefitting some without harming others (firms, consumers, or other users.) The net neutrality argument invariably focuses benefits of various policy options "at the edge" without regard to companion costs or benefits "in the core" occasioned by the same rule change. Policies and rules restricting market conduct and options of platform providers as means of fostering innovation and investment at the edge cannot be rationalized on the basis of "edge" innovation and investment benefits alone. Such restrictions will almost certainly have a negative impact on incentives with respect to suppliers of underlying networks at the core. Whatever benefits might accrue on the edge by restricting behavior in the core must be weighed in the context of costs to innovation and investment at the core. Notwithstanding the chorus of proponents about the value of innovation at the edge, none has offered any analysis or facts in support of the relationship between the rules being proposed and the kinds of innovation fostered or discouraged, the rate of diffusion of those innovations or the overall consumer welfare effects of innovations fostered relative to those discouraged by the rules. Without such an analysis, the Commission will be hard-pressed to find a legitimate basis for supporting the proposed rules on grounds that they may be expected to create greater value for consumers from

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[14] "We understand the term 'nondiscriminatory' to mean that a broadband Internet access service provider *may not charge a content, application, or service provider* for enhanced or prioritized access to the subscribers of the broadband Internet access service provider, as illustrated in the diagram below." NRPM at par. 106.

[15] Surveys of CEOs conducted by IBM verify the importance of "Business Model" innovation and diffusion. In summarizing its surveys, IBM Business Consulting reported: "While the fact that CEOs are now focusing almost 30 percent of their innovation efforts on their business models is surprising, our financial analysis uncovered an even more interesting point: Companies that have grown their operating margins faster than their competitors were putting *twice* as much emphasis on business model innovation as underperformers. In their analysis IBM quoted Erkki Liikanen, EU Commissioner for Enterprise and Information Society: "Innovation is viewed as a multi-dimensional concept, which goes beyond technological innovation to encompass… new means of distribution, marketing or design. Innovation is… an omnipresent driver for growth. See 10 page discussion entitled "Business Model Innovation Matters" at pp. 9-19 in: Expanding the innovation horizon: The IBM global CEO study 2006, March 1, 2006. Online at: http://www.smallbusinesstransitions.com/ibm-expanding-the-innovation-horizon-global-ceo-study-2006-united-states/1116.

innovation among suppliers in the Internet value cluster – network providers, content providers and applications providers.

The Commission cannot reasonably and substantively rationalize a public interest finding without far more evidence that thus far provided by advocates in support of the assertion that the proposed rules will on balance create consumer welfare by fostering innovation and investment here and in other sectors of the economy. Proponents should be obliged therefore: a) to provide evidence about the effect of maintaining the *status quo* (four principles) on innovation by at a minimum providing examples of innovation or investment deferred or spurned due to the *status quo*; b) to opine on the likely impact of such rules on innovation and investment in the core; and c) opine on the impact on innovation and investment in other sectors of any such rule. In short, the Commission should insist on the elements of a reasonable cost and benefit analysis of the impact on the edge, at the core and in other sectors.

Furthermore, the Commission should not and cannot reasonably rely on casual citations of "end-to-end arguments" as the basis for restricting operator conduct.[16] The term is variously defined, if at all, and never in a way that is analytically robust in the sense of being able to generate testable hypotheses or to test the claims made about the public interest or consumer welfare impact of changes in innovation incentives and opportunity associated with rule changes. We have tried without success to convert proponents' "end-to-end" arguments into consumer welfare terms. Existing "end-to-end" arguments show disrespect for the Commission's repeated insistence that advocates provide data and analysis in support of their policy proposals.

In light of the differing propensities to invest by core v. edge companies, if net neutrality policies work to protect content providers at the expense of ISPs and transfer economic value from the core to the edge, then these policies will lead to less investment, collectively, across edge and core companies. It goes without saying that this result is counter to goals to be emphasized in the National Broadband Policy strategy and plan.

The Industry Can Be Characterized as Having Comparatively Low Profits

As mentioned earlier, by virtue of high economies of scale, there is substantial concentration at all layers of the Internet market, including network, search, content, auction and applications. If significant amounts of market power are present and being

[16] An excellent and clear exposition of this support for this point of view is provided by, Richard Bennett, Information Technology and Innovation Foundation, Designed for Change: End-to-End Arguments, Internet Innovation, and the Net Neutrality Debate, September 2009, pp. 1-2. "To understand the current debate over Internet regulation, it's necessary to appreciate that the end-to-end arguments of network engineering differ significantly from network neutrality advocates' idiosyncratic end-to-end principle, a demand for a low-function, "stupid" network." Further, "…while end-to-end arguments reflect important aspects of the Internet's organization, the belief that the Internet is built on negative principles—prohibitions on taking action—is a serious misunderstanding of how the Internet was designed and how it works." Online at: http://www.itif.org/index.php?id=294.

exercised, it would show up in financial results.[17] The table below reflects data taken from audited financial statements. It looks at indicia of size and profitability for a selection of firms: some from the IT sector and others from the energy or pharmaceutical sector. All are compared to the Standard and Poor (S&P) average.[18]

The first three columns contain for each of the companies in the sample three different measures of profit – the profit margin (net income divided by sales); the return on invested capital (equity and debt); and the return on assets used in production. Column 4 shows revenue growth in the past five years. Columns 5 and 6 report ratios of stock price to cash flow or earnings. The last two columns indicate the relative size of the firms in the sample as measured by annual sales and the total market value placed by investors in outstanding stock.[19]

Financial Indicia Related to Market Power for Selected Companies

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
	Profit Margin* (%)	Return on Invested Capital	Return on Assets*	Sales Growth (%)**	Price To Cash Flow	P/E Ratio	Annual Sales ($B)	Market Cap ($B)
S&P 500	11.4	10.5	17.5	13.2	7.7X	11.2X	NA	NA
Google	22.9	19.7	18.1	71.6	25.8X	34.6X	22.3	157.0
Yahoo!	11.9	7.6	6.5	34.7	41.1X	NM	6.8	25.3
eBay	17.1	10.5	8.6	31.6	13.3X	20X	8.3	30.5
Amazon	3.7	21.8	9.7	29.5	39.1X	60.2X	20.5	40.3
Apple	12.2	21.6	14.0	39.2	28.6X	32.4X	34.6	166.0
Comcast	7.0	1.8	1.7	13.3	5.3X	17.5X	35.1	48.4
T-Warner	(5.7)	NM	NM	17.4	NM	NM	17.6	15.8
AT&T	10.7	5.0	4.3	25.1	5.0X	13.5X	111.4	159.0
Verizon	7.1	4.7	3.3	7.6	3.6X	14.2X	102.9	86.0
Merck	22.5	17.4	11.6	1.2	8.9X	11.8X	23.3	67.0
Abbott	13.8	13.5	9.9	11.3	10.7X	14.7X	29.7	76.5
Exxon	9.7	23.2	17.5	14.1	7.7X	11.2X	360.9	329.7

Source: http://moneycentral.msn.com/investor, accessed September 30, 2009.
* Trailing Five-Year Annual Average; **Trailing Five Years.

[17] One justification for regulation would be to deal with the existence of market power. There are several potential indicators of market power drawn from measures of market structure (monopoly for example), market conduct (predatory pricing for example), and, most importantly, abnormal returns on investment or high profit rates. Advocates for additional regulation rely on assorted rationales, but a common and popular theme is that network providers have substantial power over price and use that power to earn anticompetitive profits and returns on investment. If access providers have monopoly power, we should see monopoly returns to show for it.

[18] The data were recently accessed from MSN and can be verified at http://moneycentral.msn.com/investor.

[19] "Market Cap" equals share price times the number of outstanding shares.

The facts show that operators of broadband networks (Comcast, Time Warner, AT&T and Verizon) earn relatively modest returns compared to other major companies both inside and outside the Internet sector. Indeed, in each case, returns are below the average for firms in the S&P 500 index and substantially below those posted by other firms in the Internet Value Cluster. For example, Google's profit margin is 2-3 times greater than that earned by network providers and twice the average rate for S&P 500 firms. The comparisons are even more striking in the case of returns to equity investors or on assets. Return on investment for network providers are a fraction of those enjoyed by the average of all S&P 500 firms and, depending on the measure and company, are between 10% and 25% of those earned by Google. These earnings are the average for the past five years and are thus insulated somewhat from cyclical effects associated with the current recession.

Firms included in the table provide a variety of different services, each of which very likely earns a different return. Providers of broadband access – mainly cable television and traditional telephone service providers – are no exception. A variety of conclusions might be adduced from the table, but one that clearly stands out is that earnings and returns of network access providers do not reflect market power and do not provide the basis for concluding market failure that should be addressed by new regulations. A review of industry structure, conduct and performance, provides no evidence of a market failure that would justify regulation, including net neutrality regulations.[20] Proponents of regulation and the Commission should look elsewhere.

Industry Concentration Continues to Decline, as Competition and Choice Increase

The Internet Service Market, like most network industries, can be characterized as having high fixed costs and economies of scale. This means that consumers are able to benefit from lower prices when the market has few firms. For this reason, market structure is of little importance, compared to market performance – high growth, falling prices, high investment and comparatively lower profits.

The Internet market can be generally characterized as healthy and fast growing, and the growing presence of intermodal rival has produced competition through service differentiation. According to the FCC's latest data (June 2008), U.S. broadband services providers connected about 130 million new subscribers in the last 10 years, delivered by 863 asymmetrical digital subscriber line providers, 238 symmetrical digital subscriber line providers, 259 traditional wireline providers, 296 cable modem providers, 308 fiber providers, 4 satellite providers, 6 power line providers, 505 fixed wireless providers and 24 mobile wireless providers.[21] While geographic disparities exist, these providers have at least some coverage in every zip code in the U.S. and there are indications that competition

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[20] These points are reviewed in Larry F. Darby, "To Regulate; or Not to Regulate: Where's the Market Failure?" in *The Consequences of Net Neutrality Regulations on Broadband Investment and Consumer Welfare: A Collection of Essays*, The American Consumer Institute Center for Citizen Research, November 19, 2009. See http://www.theamericanconsumer.org/2009/11/19/aci-releases-a-book-holds-a-capitol-hill-event-the-evidence-on-net-neutrality/.

[21] These figures come from the FCC's broadband report "High-Speed Services for Internet Access" Status as of June 30, 2008, FCC, July 2009.

continues to increase. For instance, the FCC's previous broadband report estimated that 77.6% of zip codes had 5 or more providers, while its latest report estimated that 87.4% of zip codes had 5 or more providers – a 10 percentage point increase in overall U.S. penetration in just six months. By the middle of last year, there were 130 million more broadband subscribers today than there were just 10 years before. Based on the growth of the industry and increasing choice, there is no economic justification for a regulatory remedy.

According to the FCC's broadband reports, in December 1999, cable modem providers collectively accounted for 46% of high-speed lines, leaving the balance primarily to ADSL. As of June 2008, according to FCC's latest broadband report, both cable modem and ADSL providers collectively accounted for 52%, as wireless and other technologies have reduced industry concentration and increased intermodal competition. As concentration falls and consumer choices increase, risks from anticompetitive behaviors evaporate, as do the need for expanded net neutrality protections. In other words, the concentration problem that regulation would attempt solve does not exist, making any benefits from such regulation trivial.

***Ex Ante* Regulations Can Raise Consumer Prices; Reduce Quality and Innovation**

The Commission's Net Neutrality proposals confirm clearly a preference for putting in place restrictions borne of concern for, or fear of, anticompetitive or otherwise undesirable behavior (*ex ante* regulatory approach) over the alternative of responding with specific remedies, as it has frequently done in the past, to specific threats as they occur (an *ex post* approach). Both approaches may give rise to errors bearing unintended costs and consequences. The *ex ante* approach proposed by the Commission will prohibit "bad" behavior, but in doing so it will very likely create uncertainty about what is or is not prohibited and in the process prevent, delay or attenuate beneficial market conduct that otherwise would occur and in so doing deny consumers the associated benefits. Thus, there are substantial costs, associated with lost innovation, creativity, and related market conduct of will prove to be "false regulatory negatives." From a consumer perspective, these costs will likely take the form of lower service quality, fewer options, higher prices and slower innovation. While we are unable to estimate the cost of these foregone benefits from regulatory error, it is incumbent on the Commission to assess them carefully and, in particular, the extent to which they offset the equally unestimated benefits of "net neutrality" and "network openness."

While increased competition mitigates anticompetitive risks and reduces the benefits of net neutrality regulations, the *ex ante* nature of these regulations could do more harm than good. Net neutrality regulations affect the ability of Internet providers from differentiating broadband services, developing Internet content and managing network congestion in fear that Internet providers could engage in anticompetitive behaviors, even though these proposed regulations may invariably decrease consumer welfare. In evaluating the case for imposing *ex ante* regulation on the basis of the current record, the Commission should pay careful attention to the Federal Trade Commission's recent expression of concern:

> *Policy makers should be wary of calls for network neutrality regulation simply because we do not know what the net effects of potential conduct by broadband providers will be on consumers, including, among other things, the prices that consumers may pay for Internet access, the quality of Internet access and other services that will be offered, and the choices of content and applications that may be available to consumers in the marketplace. Similarly, we do not know what net effects regulation to proscribe such conduct would have on consumers. This is the inherent difficulty in regulating based on concerns about conduct that has not occurred, especially in a dynamic marketplace.*[22]

While our system of jurisprudence stresses the presumption of innocence – "it is better that ten guilty persons escape than one innocent suffer" – these regulations permit errors on what may be good conduct upfront, instead of remedying bad conduct later.

A major concern with the sort of *ex ante* approach taken here by the Commission is that it provides an opportunity for "rent seeking" behavior by firms and interest groups to delay or prevent market conduct that would increase consumer welfare, but for the damage to the interests of rent seekers. Indeed, much of the new regime proposed by the Commission in the name of openness and neutrality clearly benefits, and substantially so, a few large and prosperous firms in other parts of the Internet value cluster.[23]

Potential Costs of Regulatory Imperfections

Markets are imperfect, but so too are government regulatory processes. While the case for markets has been exhaustively researched and expressed in both empirical and theoretical terms, the infirmities of government regulation have gotten less analytical attention and are often merely implied or mentioned in passing in terms of unanticipated or unintended consequences. To be sure, economic analysts have cited regulatory lag, imperfect or asymmetric information, the absence of regulatory commitment, regulatory capture by vested interest groups, and, particularly relevant in the current context, the simple inability of well-meaning and well informed government officials reliably to forecast the impact of regulatory constraints in a dynamic market setting. Fixing markets is like shooting at a moving target. Markets solve imperfections through private contract, but also create new ones as technology evolves, consumers tastes change and market strategies mature. While many of the consequences of imposing one or another element of net neutrality based regulation on network suppliers can be reasonably and reliably foretold, many cannot. The unintended, unanticipated consequences will not be trivial.

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[22] Broadband Connectivity Competition Policy, Report of the Staff of the Federal Trade Commission, June 2007, p. 161.

[23] For fuller discussion see "Ex Post v. Ex Ante Regulatory Remedies Must Consider Consumer Benefits and Costs", American Consumer Institute, May 14, 2008 online at: http://www.theamericanconsumer.org/2008/05/14/ex-post-v-ex-ante-regulatory-remedies-must-consider-consumer-benefits-and-costs "*Ex post* regulation is widely regarded as sufficient, if imperfect, in matters of competition policy enforcement. For instance, the FCC has authority to react under the Telecommunications Act of 1996, and the Department of Justice has broad authority to react under the antitrust laws."

In this context, no less an authority than Professor Joseph Stiglitz, Nobel prize-winner and formerly Chairman of the President's Council of Economic Advisors recently wrote:

> *Anyone who has watched the U.S. government in the last seven years is well aware not only of the possibility of government failure but also of its reality. In some cases it is a matter of incompetence, in others of corruption, in still others it is a result of ideological commitments that preclude taking appropriate actions…Government programs can be subverted.*[24]

The Commission should, accordingly, consider the likelihood and costs of reasonably foreseeable instances of imperfection, or failure, in regulatory processes put in place to "fine tune" markets to offset their imperfections.

Barring Multi-Sided Market Pricing Would Reduce Consumer Welfare

While the FCC NPRM appears to permit consumers to pay different prices for different services, it clearly prohibits ISPs from offering differentiated prices to applications and content providers, effectively banning multi-sided pricing. Multi-sided pricing exists when a platform brings together independent groups that value each other's participation in the market. For instance, a newspaper (as the platform) brings together readers and advertisers -- collecting subscription fees from readers and selling ad space to businesses. Hahn and Wallsten observed that banning multi-sided pricing (effectively setting the ISP price for content providers at zero) would lead to consumer welfare losses.[25] In a comprehensive study on this issue, Darby and Fuhr found that a ban on multi-sided pricing would require consumers to pay for all of the upgrades to the Internet, thereby increasing consumer prices and decreasing broadband demand – both of which would reduce network investment.[26] The study estimated the present value of lost consumer welfare to be as much as $32 billion over 10 years, or about $285 per broadband household. Sidak evaluated and modified Darby and Fuhr's figures and re-estimated the welfare losses to be in the range of $3.44 to $7.74 billion per year.[27] Pociask found that restrictions on multi-sided market pricing would mean that consumers lose $69 billion in

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[24] Joseph E. Stiglitz, "Government and Markets: Toward a New Theory of Regulation," Government Failure vs. Market Failure: Principles of Regulation, Edward Balleisen and David Moss, Eds., The Tobin Project, (Forthcoming November, 2009), at p.17. Available online at: http://www.tobinproject.org/twobooks

[25] Robert Hahn and Scott Wallsten, "The Economics of Net Neutrality," AEI-Brookings Joint Center for Regulatory Studies, 2006.

[26] Larry F. Darby and Joseph P. Fuhr, Jr., "Consumer Welfare, Capital Formation and Net Neutrality: Paying for Next Generation Broadband and Networks," *Media Law and Policy*, Summer 2007, pp. 122-64.

[27] J. Gregory Sidak, "A Consumer Welfare Approach to Network Neutrality Regulation of the Internet," *Journal of Competition Law and Economics*, 2:3, pp. 349-474, 2006.

potential benefits over the next 10 years.[28] The Department of Justice, citing ACI's and other studies agreed that consumer welfare and innovation would he harmed:

> *The FCC should be highly skeptical of calls to substitute special economic regulation of the Internet for free and open competition enforced by the antitrust laws. Marketplace restrictions proposed by some proponents of "net neutrality" could in fact prevent, rather than promote, optimal investment and innovation in the Internet, with significant negative effects for the economy and consumers.*[29]

Net neutrality, as currently proposed by the FCC in its NPRM, would also prevent ISPs from providing enhanced quality of service to unaffiliated content providers. Litan and Singer estimated that this would lead to billions of dollars of consumer welfare losses – including a $1.5 billion decrease in consumer welfare just for foreclosing enhanced quality of service offerings to online multi-player video game providers.[30] In other words, net neutrality, as currently proposed, would prohibit voluntary commercial agreements with unaffiliated content providers – a practice that would keep consumers from getting lower broadband prices and make consumers pay for all of the investment and upgrade costs for the next generation network.[31] In summary, all of the welfare studies that we have seen estimate that consumer surplus will be reduced by net neutrality regulations. The Commission should insist that advocates be more forthcoming with data and analysis, and absent those, avoid imposing new constraints on network providers that reduce consumer welfare and push costs solely to consumers to bear.

Conclusion

There is no evidence of market failure that would justify the proposed net neutrality regulations. To the contrary, numerous studies find that net neutrality regulation would reduce consumer welfare. We have yet to find an empirical study demonstrating that net neutrality would increase consumer welfare, decrease consumer prices or increase network investment. Proponents have yet to address those issues in any reasonably analytical way, thereby leaving the Commission with little empirical evidence on which to base its

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[28] Stephen Pociask, "Net Neutrality and the Effects on Consumers," The American Consumer Institute, May 9, 2007, http://www.nextgenweb.org/wp-content/uploads/2007/08/aci-net-neutrality-and-the-effects-on-consumers-stephen-pociask.pdf.

[29] "In the Matter of Broadband Industry Practices," WC Docket No. 07-52, Ex parte Filing from the United States Department of Justice to the Federal Communications Commission, September 6, 2007, p. 1, available at http://www.usdoj.gov/atr/public/comments/225767.htm.

[30] Robert E. Litan and Hal J. Singer, "Unintended Consequences of Net Neutrality Regulation," *Journal on Telecommunications and High Technology Law*, 2007.

[31] For a summary of the evidence see Hance Haney, "Net Neutrality Regulation Would Impose Consumer Welfare Losses," in *The Consequences of Net Neutrality Regulations on Broadband Investment and Consumer Welfare: A Collection of Essays*, The American Consumer Institute Center for Citizen Research, November 19, 2009; and Stephen B. Pociask, "Does Net Neutrality Help or Hurt Consumer?, in *The Consequences of Net Neutrality Regulations on Broadband Investment and Consumer Welfare: A Collection of Essays*, The American Consumer Institute Center for Citizen Research, November 19, 2009, sssshttp://www.theamericanconsumer.org/2009/11/19/aci-releases-a-book-holds-a-capitol-hill-event-the-evidence-on-net-neutrality/.

proposed regulations. Given Congresses' goal of developing a national broadband plan, instituting net neutrality regulations would be premature and risks being inconsistent with the investment and consumer welfare goals sure to emerge.

Given the strong growth and investment in markets for broadband services, decreasing market concentration, falling rates and increased broadband speeds, we urge the Commission to clarify why these regulations are now needed and how they square with its own words about how the absence of Internet regulation aided the successful promotion of network investment, innovation and growth:

> *The Internet has evolved at an unprecedented pace, in large part due to the absence of government regulation. Consistent with the tradition of promoting innovation in new communications services, regulatory agencies should refrain from taking actions that could stifle the growth of the Internet. During this time of rapid telecommunications liberalization and technology innovation, unnecessary regulation can inhibit the global development and expansion of Internet infrastructure and services. To ensure that the Internet is available to as many persons as possible, the FCC has adopted a "hands-off" Internet policy. We are in the early stages of global Internet development, and policymakers should avoid actions that may limit the tremendous potential of Internet delivery.*[32]

In summary, the evidence shows that there has been no market failure to justify net neutrality regulations, and that the proposed Internet regulations would impede network investment and reduce consumer welfare. Advocates calling for regulations have adduced virtually no evidence that is consistent with widely accepted economic theory or the facts of current market conduct and performance. Thus, advocates have not provided the evidence needed for the Commission to analyze the consumer welfare implications, and to weigh the costs and benefits, of reversing the decades-long trend toward reliance on markets. The Commission is entitled to, and should, insist that advocates of re-regulation show that expected consumer benefits of doing so exceed the associated costs. Advocates' litany of complaints about the *status quo* and expressions of fear about possible future harms do not meet that standard.

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[32] "Connecting the Globe: A Regulator's Guide to Building a Global Information Community, Federal Communications Commission, available at http://www.fcc.gov/connectglobe/.